



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

September 15, 2014

Mr. Eric Gasch  
Planning and Environmental Branch  
U.S. Army Corps of Engineers  
Wilmington District  
69 Darlington Avenue  
Wilmington, North Carolina 28403

**Subject: EPA NEPA Review Comments on Wilmington District's FEIS "Integrated Feasibility Report and Final Environmental Impact Statement (FEIS) Bogue Banks Coastal Storm Damage Reduction Project"; CEQ #20140226**

Dear Mr. Gasch:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject U.S. Army Corps of Engineers' (Corps) Final Integrated Feasibility Report and Final Environmental Impact Statement (FEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. It is our understanding that the Corps initiated this study and subsequent EIS to evaluate coastal storm damage reduction at Bogue Banks, a 25.4-mile long barrier island located on North Carolina's central coast in Carteret County.

The Corps indicates that this Feasibility study and the FEIS identifies a National Economic Development (NED) plan which is the plan that maximizes net benefits to the nation through reduction of future storm damages. The NED plan consists of an 119,670 ft (22.7 miles) long main beach fill with a consistent berm profile across the entire area, and dune expansion in certain portions (approximately 5.9 miles of the project).<sup>1</sup>

EPA was invited to and participated in multiple project delivery team (PDT) meetings associated with this project over the past several years. We appreciate the Corps efforts to coordinate with the Region on this project.

Our comments provided to the Corps on the DEIS primarily focused on the areas of causes of erosion, economics, project cost, water quality, selection of LEDPA, project life, estimated material needed for construction, federally listed species, protection of hard bottom areas, sand compatibility, nourishment schedule, and consideration of EJ impacts. EPA notes that the Corps provided responses to our comments in a dedicated section of the FEIS – Appendix M. EPA

---

<sup>1</sup> p. i-ii of Executive Summary of FEIS

appreciates the Corps efforts to organize all responses to comments in a concise table in Appendix M.

**EPA Comments:**

EPA has reviewed the responses to our comments on the DEIS provided in Appendix M. Overall, we believe the majority of the Corps responses adequately respond to our comments on the DEIS. Our review and analysis of responses to comments are provided below:

Causes of Erosion – In our comments on the DEIS, EPA recommended the causes of erosion on Bogue Banks be fully discussed in the FEIS. EPA has reviewed the additional information provided in Sections 1.04, 4.06.2 and 9.10 and has no additional comments.

Economics – In our comments on the DEIS, EPA recommended providing additional details from actual storm events in the economic report for the FEIS that support the average annual damage estimates presented in the DEIS. EPA notes that the Corps did not directly address this recommendation in the FEIS. We continue to support the inclusion of actual storm damage estimates to support the estimated average annual estimates provided in the EIS if this data is available.

Project Cost – In our comments on the DEIS, EPA recommended the Corps clarify the total project cost and clearly state the total project cost that the benefit cost ratio is based on in the DEIS. EPA notes that the Corps provided clarifying language in the FEIS as to when costs were estimated and which discount rates were applied to the estimates. EPA has no additional comments on project cost estimate.

Water Quality - In our comments on the DEIS, EPA recommended adding additional detail and information in the FEIS regarding existing water quality conditions in Bogue Sound, Bogue Inlet, White Oak River, Newport River, and Beaufort Inlet. In addition, EPA also recommended the EIS be revised to include information relating to NPDES sites and existing infrastructure that might be impacted by the project. EPA notes that section 2.02.1 and section 7.09.2 have been updated to include Bogue Sound water quality data and information relating to existing infrastructure NPDES sites in Carteret County.

Selection of the LEDPA - In our comments on the DEIS, EPA recommended the Corps provide additional information in the FEIS on how the 'TSP' meets the CWA Section 404(b)(1) Guidelines ("Guidelines"; 40 C.F.R. Part 230). EPA notes that additional discussion has been included in section 7.09.2 of the FEIS relating to the Corps reasoning for selecting the proposed plan. EPA has no additional comments on the selection of the LEDPA.

Length of the Project - In our comments on the DEIS, EPA recommended the Corps provide a clear adaptive management strategy in the FEIS that included performance and/or success criteria that will adequately capture the dynamic nature of the proposed project and help direct any future changes to the project that may be needed to avoid and minimize impacts to the environment. EPA has reviewed sections 6.04.1 – Beach Fill Monitoring and 6.04.2 – Environmental Monitoring and Other Commitments. EPA notes that beach fill monitoring will

“cover semiannual beach profile surveys, aerial photography, and an annual monitoring report”<sup>2</sup> and, “Seabeach amaranth monitoring will be conducted for 5 years following the initial sediment placement.”<sup>3</sup> EPA supports these proposed monitoring efforts and recommend that these commitments be clearly outlined in the Chief’s Report.

Estimated Material Needed for the Project - In our comments on the DEIS, EPA recommended the Corps provide justification in the FEIS regarding the reason for the significant difference between past nourishment activities and the currently proposed plan as described in Alternative 9. EPA notes that section 1.09 of the FEIS was updated to reflect the different purposes of the material disposal and beach fill activities. EPA understands that these historical disposal actions are fundamentally different types of projects from the proposed coastal storm damage reduction project. EPA has no additional comments related to material needs.

Threatened and Endangered (T&E) Species – In our comments on the DEIS, EPA recommended the Corps revise and update Table 2.4 in the FEIS to reflect the current status of federally listed species. EPA also recommended that the linear feet of beach and acreages be provided in the FEIS with respect to piping plover critical habitat and that the Corps provide additional details about the on-going study of *Atrytonopsis* sp. 1. In addition, EPA also recommended continued coordination with the USFWS. EPA notes that the Corps revised Table 2.4 in the FEIS to reflect the current status of federally-listed species and we note the additional information provided on the Piping plover critical habitat. EPA has no additional comments.

Protection of Hard Bottom Areas – In our comments on the DEIS, EPA recommended the Corps revise the FEIS by adding additional data and citations to support the proposed 500-meter buffer for hardbottom areas. Any loss of the existing hard bottom features offshore should be investigated promptly to determine causal factors and appropriate action. EPA notes the inclusion of language referencing the North Carolina Coastal Resources Commission [CRC Rule 15A NCAC 07H .0208(b)(12)(A)(iv)] as the source of the proposed 500-meter buffer proposed in the EIS in section 7.02.7. EPA has no additional comments.

Sand Compatibility – In our comments on the DEIS, EPA recommended the Corps use the North Carolina Sediment Criteria Rule when determining sand compatibility for this project. EPA notes that the following commitments are made by the Corps in the Biological Assessment (BA) in relation to using beach compatible sediments: 1) “Only beach compatible sediment will be placed on the beach as a component of this project. Detailed analyses of the borrow area and native beach sediments will be completed prior to placing sediment on the beach to assure compatibility. Post nourishment beach compaction (hardness) will be evaluated by the Corps, in coordination with the NCWRC and USFWS, using qualitative assessment techniques to assure that impacts to nesting and incubating sea turtles are minimized and, if necessary, identify appropriate mitigation responses” and 2) “Only beach quality sand shall be used for this project. The Contractor will conduct daily visual survey of the material being placed. Should the dredging operations encounter sand deemed non-compatible with the native grain size or sorting characteristics of the native beach, the dredge operator shall immediately cease operation and

---

<sup>2</sup> p. 95 of FEIS

<sup>3</sup> p. 96 of FEIS

contact the DCM. Dredge operations will resume only after the issue of sand compatibility is resolved.”<sup>4</sup> Nevertheless, EPA believes that “beach quality sand” could have been better defined in the BA and we defer to the Corps, NCWRC, and the USFWS on ensuring beach material used for the proposed project has a minimal impact on listed species.

**Nourishment Schedule** - In our comments on the DEIS, EPA recommended the Corps provide additional justification in the FEIS that supports the selected 3 year interval or consider a longer renourishment interval that is more protective of federally-listed species. EPA notes the Corps’ response related to the (pros and cons) of adjusting (extending or shortening) the nourishment schedule interval in Appendix M. EPA has no additional comments related to the nourishment interval and defers to the Corps and the USFWS on this issue.

**Environmental Justice (EJ)** – In our comments on the DEIS, EPA recommended that the FEIS include an EJ analysis that includes descriptions of the local demographics and identifies low-income and minority populations that have the potential to be impacted by the proposed action. EPA appreciates the inclusion of the EJ analysis in section 9.15 and has no additional comments relating to EJ.

**Summary:**

The EPA appreciates the opportunity to review this FEIS. We request that the Corps provide specific responses in the Record of Decision (ROD) to our outstanding concerns listed above. We also request that the Corps provide EPA with a copy of the final signed ROD and Chief’s Report when the documents become available. Should your staff have any questions regarding our comments, please feel free to contact Dan Holliman of my staff at 404/562-9531 or [holliman.daniel@epa.gov](mailto:holliman.daniel@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Heinz J. Mueller", with the word "for" written below it.

Heinz J. Mueller  
Chief, NEPA Program Office  
Office of Environmental Accountability

---

<sup>4</sup> Appendix F of FEIS – BA – Section 5.00 – Commitments to Reduce Impacts to Listed Species